

What is claimed is

- 1) A method for preventing the appearance of undesirable artifacts that may be produced when converting a raster image to a Page Description Language (PDL) image, by dividing the raster image into segments of like color and describing each segment in the syntax of the PDL, and then rendering the PDL image to raster format (ripping) while rotating the image data by a small angle (bottling), comprising the steps of:
 - i. setting the size of each segment of like color to a minimum size in each of two image dimensions (height and width); and
 - ii. converting said raster image to said PDL image.
- 2) A method for preventing the appearance of bottling artifacts while converting a raster image to a PDL image, comprising the steps of:
 - i. increasing the size of each image segment of like color, which is to appear in said PDL image, by a small amount so that said segments overlap each other in each of the two image dimensions.
 - ii. converting said raster image to said PDL image.
- 3) A method for preventing the appearance of bottling artifacts while converting a raster image to a PDL image, comprising the steps of:
 - i. increasing the size of the segments of like color by a small amount; and
 - ii. sorting said segments according to their color content.
- 4) The method of claim 3, wherein said sorting the segments further comprises:
 - i. defining the number of transparent separations for the segment; and
 - ii. sorting said segments in such a way so that said segments having a larger number of transparent separations appear before said segments having a smaller number of transparent separations.
- 5) A method for preventing the appearance of bottling artifacts while converting a raster image to a PDL image, comprising the steps of:
 - i) identifying borders between adjoining image segments to appear in the PDL image;
 - ii) increasing the height of each segment by a small amount, if no adjoining image segments appear below said segment;

- iii) adding new image segment or segments horizontally across said segment, if not enlarged in step ii), each new image segment having the same color value as said segment and a small size (HxW), in each of the two image dimensions, so that the totality of new image segments completely and exactly overlaps the lower area of said segment.
 - iv) increasing width of each segment by a small amount, if no adjoining image segments appear to the right of said segment; and
 - v) adding new image segments vertically across said segment, if not enlarged in step iv), each new image segment having the same color value as said segment and a small size (HxW), in each of the two image dimensions, so that the totality of new image segments completely and exactly overlaps the left and/or right area of said segment.
- 6) A system for preventing the appearance of undesirable artifacts that may be produced when converting a raster image to a Page Description Language (PDL) image, by dividing the raster image into segments of like color and describing each segment in the syntax of the PDL, and then rendering the PDL image to raster format (ripping) while rotating the image data by a small angle (bottling), comprising
- i. software means for analyzing, sorting, vectoring and editing said vectored raster image content while converting said raster image to a PDL image;
 - ii. memory means for storing image characteristics and content changes; and
 - iii. processing means for executing said image conversion based on said characteristics and said content changes.
7. The system of claim 6, wherein said software means controls activities selected from the group of activities consisting of setting the size of segments of like color to a minimum size, increasing the size of said segments of like color, enlarging said segments to overlap each other, calculating total ink values for an image segment, sorting said segments according to their color content, recording image segments in some preferred order, sorting image segments according to transparency, decomposing segments of like color to core parts and border parts, identifying borders between image segments, and adding small image segments along borders.